

Rated output at 50 Hz	60 Hz	Frame size	Operating values at Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 50 Hz 400 V	Rated current at 50 Hz 690 V	Order No. For Order No. suppl- ements for voltage and type of construction, see table below	Price	Weight of IM B3 type of con- struction approx.
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm	η_{rated} %	η_{rated} %	$\cos\phi_{\text{rated}}$	I_{rated} A	I_{rated} A			m kg
2-pole, 3000 rpm at 50 Hz, 3600 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V												
250	280	315	2979	801	96.2	96.2	0.90	415	240	1LA8 315-2PCQQ		1300
315	353	315	2979	1010	96.5	96.5	0.91	520	300	1LA8 317-2PCQQ		1500
355	398	355	2980	1140	96.5	96.5	0.90	590	340	1LA8 353-2PCQQ		1900
400	448	355	2980	1280	96.7	96.7	0.91	660	380	1LA8 355-2PCQQ		2000
500	560	355	2982	1600	97.1	97.1	0.91	820	475	1LA8 357-2PCQQ		2200
560	616	400	2985	1790	97.1	97.1	0.91	910	530	1LA8 403-2PCQQ		2800
630	693	400	2985	2020	97.1	97.1	0.91	1020	600	1LA8 405-2PCQQ		3000
710	781	400	2985	2270	97.3	97.3	0.91	–	670 ¹⁾	1LA8 407-2PCQQ		3200
800	–	450	2986	2560	97.2	97.2	0.91	–	760	1LA8 453-2PEQQ		4000
900	–	450	2986	2880	97.3	97.3	0.92	–	840	1LA8 455-2PEQQ		4200
1000	–	450	2986	3200	97.4	97.4	0.93	–	920	1LA8 457-2PEQQ		4400
4-pole, 1500 rpm at 50 Hz, 1800 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V												
250	288	315	1488	1600	96.0	96.0	0.87	430	250 ²⁾	1LA8 315-4PBQQ		1300
315	362	315	1488	2020	96.2	96.2	0.87	540	315 ²⁾	1LA8 317-4PBQQ		1500
355	408	355	1488	2280	96.3	96.3	0.87	610	355 ²⁾	1LA8 353-4PBQQ		1900
400	460	355	1488	2570	96.4	96.4	0.87	690	400 ²⁾	1LA8 355-4PBQQ		2000
500	575	355	1488	3210	96.7	96.7	0.88	850	490 ²⁾	1LA8 357-4PBQQ		2200
560	644	400	1492	3580	96.7	96.7	0.88	950	550	1LA8 403-4PBQQ		2800
630	725	400	1492	4030	96.9	96.9	0.88	1060	620	1LA8 405-4PBQQ		3000
710	817	400	1492	4540	97.0	97.0	0.89	–	690 ¹⁾	1LA8 407-4PBQQ		3200
800	920	450	1492	5120	97.0	97.0	0.88	–	780 ¹⁾	1LA8 453-4PCQQ		4000
900	1040	450	1492	5760	97.1	97.1	0.88	–	880	1LA8 455-4PCQQ		4200
1000	1150	450	1492	6400	97.1	97.1	0.89	–	970	1LA8 457-4PCQQ		4400

Order No. supplements

Motor type	Penultimate position: Voltage code				Final position: Type of construction code			
	400 VΔ	400 VΔ/690 VY ³⁾	500 VΔ	690 VΔ ³⁾	Without flange IM B3	With flange IM V1 without protective cover ⁴⁾	IM V1 with protective cover ⁵⁾	IM B35
	4	8	5	7	0	8	4	6
1LA8 315-... QQ to 1LA8 405-... QQ	○	□	○	–	□	✓ ⁶⁾	✓ ⁶⁾	✓
1LA8 407-... QQ to 1LA8 457-... QQ	–	–	○	□	□	✓ ⁶⁾	✓ ⁶⁾	✓ ⁷⁾

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

Order other voltages with voltage code **9** in the penultimate position and the corresponding order code (see “Special versions” in the “Options” under “Voltages”).

Voltages or frequencies that are not covered by the predefined options can be ordered with order code **L1Y**. In this case, the output, voltage and frequency must be specified.

¹⁾ Can also be supplied for 400 VΔ 50 Hz with voltage code “**9**” and order code **L1Y** (specify output, voltage and frequency).

²⁾ *Standardline* for 1LA8 motors is a standardized range in specific versions which can be ordered with the order code **B20**. The delivery time is 4 weeks. Scope of the *Standardline*: 4-pole, types **1LA8 315**, **1LA8 317**, **1LA8 353**, **1LA8 355**, type of construction code **0** (IM B3), voltage code **4** (400 VΔ), **8** (400 VΔ/690 VY) or **5** (500 VΔ); can be ordered for converter-fed operation, but not in 690 V version. Possible order codes: **A23**, **A61**, **A72**, **G50**, **H70**, **H73**, **K09**, **K10**, **K45**, **K46**, **K57**, **K83**, **K84**, **K85**, **L00**, **L97**, **M58** (for frame size 315 only), **M88**, **Y53**.

³⁾ Motors with standard insulation can only be operated with converter circuit (du/dt or sinusoidal filter).

⁴⁾ For explosion-proof motors, the type of construction IM V1 without protective cover is not possible.

⁵⁾ The “Second shaft extension” option, order code **K16** is not possible.

⁶⁾ In 2-pole motors 60 Hz version, not possible for 1LA8 353 to 1LA8 457.

⁷⁾ In 2-pole motors 60 Hz version, not possible for 1LA8 453 to 1LA8 457.

Order No.	At 50 Hz as multiple of rated torque	Torque class	Moment of inertia	Noise Measuring surface sound pressure level at 50 Hz For rated output and sinusoidal supply, 50 Hz, tolerance +3 dB(A)	Sound power level at 50 Hz	Mech. limit speed ¹⁾		Parallel feeders required		
	T_B/T_{rated}	CL	J kgm ²	L_{pA} dB(A)	L_{WA} dB(A)	$n_{max.}$ rpm	$f_{max.}$ Hz	400 V	500 V	690 V
2-pole, 3000 rpm at 50 Hz, 3600 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V										
1LA8 315-2PCQQ	2.8	10	2.7	82 (75) ²⁾	97 (90) ²⁾	3600	60	Yes		
1LA8 317-2PCQQ	2.8	10	3.3	82 (75) ²⁾	97 (90) ²⁾	3600	60	Yes		
1LA8 353-2PCQQ	2.5	10	4.8	77 ³⁾	92 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾	Yes	Yes	
1LA8 355-2PCQQ	2.5	10	5.3	77 ³⁾	92 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾	Yes	Yes	
1LA8 357-2PCQQ	2.6	10	6.4	77 ³⁾	92 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾	Yes		
1LA8 403-2PCQQ	2.8	10	8.6	79 ³⁾	94 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾	Yes		
1LA8 405-2PCQQ	2.8	10	9.6	79 ³⁾	94 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾	Yes	Yes	
1LA8 407-2PCQQ	2.8	10	11	79 ³⁾	94 ³⁾	3600/3100 ⁴⁾	60/52 ⁴⁾		Yes	
1LA8 453-2PEQQ	3.0	5	19	81 ³⁾	96 ³⁾	3000	50		Yes	
1LA8 455-2PEQQ	2.8	5	21	81 ³⁾	96 ³⁾	3000	50		Yes	Yes
1LA8 457-2PEQQ	2.7	5	23	81 ³⁾	96 ³⁾	3000	50		Yes	Yes
4-pole, 1500 rpm at 50 Hz, 1800 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V										
1LA8 315-4PBQQ	2.8	13	3.6	73	87	3000 (2650)	100 (88)	Yes		
1LA8 317-4PBQQ	2.8	13	4.4	73	87	3000 (2650)	100 (88)	Yes		
1LA8 353-4PBQQ	2.6	13	6.1	75	90	2500 (2350)	83 (78)	Yes	Yes	
1LA8 355-4PBQQ	2.6	13	6.8	75	90	2500 (2350)	83 (78)	Yes	Yes	
1LA8 357-4PBQQ	2.4	13	8.5	75	90	2500 (2350)	83 (78)	Yes		
1LA8 403-4PBQQ	2.7	13	13	78	93	2200 (2100)/2100 ⁴⁾	73 (70)/70 ⁴⁾	Yes		
1LA8 405-4PBQQ	2.7	13	14	78	93	2200 (2100)/2100 ⁴⁾	73 (70)/70 ⁴⁾	Yes	Yes	
1LA8 407-4PBQQ	2.7	13	16	78	93	2200 (2100)/2100 ⁴⁾	73 (70)/70 ⁴⁾		Yes	
1LA8 453-4PCQQ	2.6	10	23	81	96	2100 (1900)/1800 ⁴⁾	70 (63)/60 ⁴⁾	Yes		
1LA8 455-4PCQQ	2.6	10	26	81	96	2100 (1900)/1800 ⁴⁾	70 (63)/60 ⁴⁾	Yes	Yes	
1LA8 457-4PCQQ	2.6	10	28	81	96	2100 (1900)/1800 ⁴⁾	70 (63)/60 ⁴⁾	Yes	Yes	

Values in brackets apply to the use of motors in hazardous areas.

¹⁾ Limit speeds for reinforced bearings (order code **K20**) for 4-pole motors on request.

²⁾ Low-noise version, 2-pole, in brackets. To reduce noise, 2-pole motors can be equipped with an axial fan that is only suitable for one direction of rotation. Clockwise rotation order code **K37**, counter-clockwise rotation **K38**.

³⁾ In the standard version, the motors already have an axial fan for clockwise rotation. Order code **K37** is not necessary. For counter-clockwise rotation, order code **K38** is necessary.

⁴⁾ For vertical type of construction IM V1.

Rated output at 50 Hz	60 Hz	Frame size	Operating values at Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 50 Hz 400 V	Rated current at 50 Hz 690 V	Order No. supple- ments for voltage and type of construction, see table below	Price	Weight of IM B3 type of con- struction approx.
P_{rated} kW	P_{rated} kW	FS	η_{rated} rpm	T_{rated} Nm	η_{rated} %	η_{rated} %	$\cos\phi_{\text{rated}}$	I_{rated} A	I_{rated} A			m kg
6-pole, 1000 rpm at 50 Hz, 1200 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V												
200	230	315	988	1930	95.7	95.8	0.86	345	200	1LA8 315-6PBQQ		1300
250	288	315	988	2410	95.9	96.0	0.86	430	250	1LA8 317-6PBQQ		1500
315	362	355	993	3040	96.2	96.2	0.86	540	315	1LA8 355-6PBQQ		2000
400	460	355	993	3850	96.5	96.5	0.86	690	400	1LA8 357-6PBQQ		2200
450	518	400	991	4330	96.5	96.5	0.86	780	455	1LA8 403-6PBQQ		2800
500	575	400	991	4810	96.5	96.5	0.86	860	500	1LA8 405-6PBQQ		3000
560	644	400	991	5390	96.7	96.7	0.86	960	560	1LA8 407-6PBQQ		3200
630	725	450	993	6060	96.8	96.8	0.86	1100	630	1LA8 453-6PBQQ		4000
710	817	450	993	6830	96.8	96.8	0.86	–	710 ¹⁾	1LA8 455-6PBQQ		4200
800	920	450	993	7690	97.0	97.1	0.86	–	790 ¹⁾	1LA8 457-6PBQQ		4500
8-pole, 750 rpm at 50 Hz, 900 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V												
160	184	315	739	2070	94.9	94.9	0.82	295	172	1LA8 315-8PBQQ		1300
200	230	315	739	2580	95.2	95.2	0.82	370	215	1LA8 317-8PBQQ		1500
250	288	355	741	3220	95.7	95.7	0.82	460	265	1LA8 355-8PBQQ		2000
315	362	355	741	4060	96.0	96.0	0.82	580	335	1LA8 357-8PBQQ		2200
355	408	400	742	4570	96.1	96.1	0.82	650	375	1LA8 403-8PBQQ		2800
400	460	400	742	5150	96.2	96.2	0.82	730	425	1LA8 405-8PBQQ		3000
450	518	400	742	5790	96.3	96.3	0.82	820	475	1LA8 407-8PBQQ		3200
500	575	450	744	6420	96.4	96.4	0.81	920	540	1LA8 453-8PBQQ		4000
560	644	450	744	7190	96.5	96.5	0.81	1040	600	1LA8 455-8PBQQ		4200
630	725	450	744	8090	96.6	96.6	0.81	1160	670	1LA8 457-8PBQQ		4500

Order No. supplements

Motor type	Penultimate position: Voltage code				Final position: Type of construction code			
	400 VΔ	400 VΔ/690 VY ²⁾	500 VΔ	690 VΔ ²⁾	Without flange IM B3	With flange IM V1 without protective cover ³⁾	IM V1 with protective cover ⁴⁾	IM B35
	4	8	5	7	0	8	4	6
6-pole								
1LA8 315- ... QQ to 1LA8 453- ... QQ	○	□	○	–	□	✓	✓	✓
1LA8 455- ... QQ to 1LA8 457- ... QQ	–	–	○	□	□	✓	✓	✓
8-pole								
1LA8 315- ... QQ to 1LA8 457- ... QQ	○	□	○	– ⁵⁾	□	✓	✓	✓

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

Order other voltages with voltage code **9** in the penultimate position and the corresponding order code (see “Special versions” in the “Options” under “Voltages”).

Voltages or frequencies that are not covered by the predefined options can be ordered with order code **L1Y**. In this case, the output, voltage and frequency must be specified.

¹⁾ Can also be supplied for 400 VΔ 50 Hz with voltage code “**9**” and order code **L1Y** (specify output, voltage and frequency).

²⁾ Motors with standard insulation can only be operated with converter circuit (du/dt or sinusoidal filter).

³⁾ For explosion-proof motors, the type of construction IM V1 without protective cover is not possible.

⁴⁾ The “Second shaft extension” option, order code **K16** is not possible.

⁵⁾ As special version with voltage code “**9**” and order code **1LY** (specify output, voltage and frequency).

Order No.	At 50 Hz as multiple of rated torque	Torque class	Moment of inertia	Noise Measuring surface sound pressure level at 50 Hz For rated output and sinusoidal supply, 50 Hz, tolerance +3 dB(A)	Sound power level at 50 Hz	Mech. limit speed ¹⁾		Parallel feeders required		
	T_B/T_{rated}	CL	J kgm ²	L_{p1A} dB(A)	L_{WA} dB(A)	$n_{max.}$ rpm	$f_{max.}$ Hz	400 V	500 V	690 V
6-pole, 1000 rpm at 50 Hz, 1200 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V										
1LA8 315-6PBQQ	2.5	13	6.0	68	82	2950 (2350)	147 (117)			
1LA8 317-6PBQQ	2.5	13	7.3	68	82	2950 (2350)	147 (117)	Yes		
1LA8 355-6PBQQ	2.8	13	13	71	86	2500 (2100)	125 (105)	Yes		
1LA8 357-6PBQQ	2.8	13	16	71	86	2500 (2100)	125 (105)	Yes	Yes	
1LA8 403-6PBQQ	2.8	13	21	73	88	2200 (1900)/2100 ²⁾	110 (95)/105 ²⁾			
1LA8 405-6PBQQ	2.8	13	24	73	88	2200 (1900)/2100 ²⁾	110 (95)/105 ²⁾	Yes		
1LA8 407-6PBQQ	2.8	13	27	73	88	2200 (1900)/2100 ²⁾	110 (95)/105 ²⁾	Yes		
1LA8 453-6PBQQ	2.6	13	35	75	90	2100 (1700)/1800 ²⁾	105 (85)/90 ²⁾	Yes	Yes	
1LA8 455-6PBQQ	2.5	13	39	75	90	2100 (1700)/1800 ²⁾	105 (85)/90 ²⁾		Yes	
1LA8 457-6PBQQ	2.5	13	44	75	90	2100 (1700)/1800 ²⁾	105 (85)/90 ²⁾		Yes	
8-pole, 750 rpm at 50 Hz, 900 rpm at 60 Hz, temperature class 155 (F), used acc. to temperature class 155 (F), IP55 degree of protection, specially for operation on SINAMICS or SIMOVERT MASTERDRIVES with standard insulation for voltages ≤500 V										
1LA8 315-8PBQQ	2.3	13	6.0	65	79	2950 (2350)	196 (156)			
1LA8 317-8PBQQ	2.3	13	7.3	65	79	2950 (2350)	196 (156)			
1LA8 355-8PBQQ	2.4	13	13	67	82	2500 (2100)	166 (140)			
1LA8 357-8PBQQ	2.4	13	16	67	82	2500 (2100)	166 (140)	Yes		
1LA8 403-8PBQQ	2.6	13	21	69	84	2200 (1900)/2100 ²⁾	146 (126)/140 ²⁾			
1LA8 405-8PBQQ	2.6	13	24	69	84	2200 (1900)/2100 ²⁾	146 (126)/140 ²⁾			
1LA8 407-8PBQQ	2.6	13	27	69	84	2200 (1900)/2100 ²⁾	146 (126)/140 ²⁾	Yes		
1LA8 453-8PBQQ	2.4	13	35	71	86	2100 (1700)/1800 ²⁾	140 (113)/120 ²⁾	Yes		
1LA8 455-8PBQQ	2.4	13	39	71	86	2100 (1700)/1800 ²⁾	140 (113)/120 ²⁾	Yes	Yes	
1LA8 457-8PBQQ	2.4	13	44	71	86	2100 (1700)/1800 ²⁾	140 (113)/120 ²⁾	Yes	Yes	

Values in brackets apply to the use of motors in hazardous areas.

1) Limit speeds for reinforced bearings (order code **K20**) for 6- and 8-pole motors on request.

2) For vertical type of construction IM V1.